



2022 Automated Traffic Enforcement Annual Report

Calgary Police Service

Introduction

The Calgary Police Service (CPS) deploys automated traffic enforcement (ATE) in a manner consistent with the provincial ATE Technology Guidelines. CPS uses manned photo radar and Intersection Safety Devices (ISDs). ATE assists in creating a safe driving environment, as motorists are more likely to obey the rules of the road if there is a possibility of getting caught.

One or more of these criteria must be met before ATE is deployed at a specific site:

- Conventional enforcement is unsafe or ineffective.
- The area has a history of collisions.
- The area has a documented history of speeding.
- The intersection has a documented history of red light offences.
- The area is in a school or playground zone.
- The area is in a construction zone.

CPS compiles statistical data on roadway traffic, speeds, and collisions, deploying ATE accordingly. ATE deployment is designed to create awareness of -- and enforce -- the Traffic Safety Act. The following variables are analyzed by CPS's Specialized Traffic Enforcement Unit to determine where ATE should be deployed:

- Traffic volume
- Number of collisions
- Types of collisions
- Severity of injury resulting from collisions
- High speed locations
- Community concerns
- Violation rates

Context

In 2022 there were 1,002,670 motorized vehicles registered in Calgary, a slight decrease compared to 1,006,510¹ in 2021. However, due to growth in surrounding communities, traffic volumes in Calgary likely increased. Calgary's population² has also been steadily increasing. In 2022 it reached 1.3 million people, 53% greater than in 2001.

¹ Government of Alberta (2023). *Motorized vehicle registrations: select municipalities as of March 31*.

<https://open.alberta.ca/publications/number-of-motorized-vehicles-registered-in-alberta-as-of-march-31-years>

² Corporate Economics at the City of Calgary provides population estimates for 2021 and 2022 (City of Calgary (2023). *Corporate Economics*. <https://www.calgary.ca/research/corporate-economics.html>). Population estimates for the previous years come from the Civic Census (City of Calgary (2023). *Civic Census*. <https://www.calgary.ca/info-requests/civic-census.html>). The 2020 population estimate is the same as the 2019 population estimate as the Civic Census was cancelled in 2020 due to the COVID-19 pandemic.

Types of ATE deployed in Calgary

1. Photo radar

Manned photo radar units are deployed to specific sites across the City of Calgary, adhering to provincial ATE Technology Guidelines. Enforcement focuses on reducing vehicle speeds and collisions. Citizens can request the deployment of photo radar to a roadway of concern through the [CPS website](#).

2. ISDs

ISDs are placed at intersections and can identify red light and speed on green violations to improve intersection safety. The City of Calgary has 52 ISDs that were operational in 2022 that monitor 48 intersections. These intersections have photo enforcement signage placed at all approaches to increase public awareness and safety.

ATE fine revenue and investment

Fine revenue collected from ATE is used to offset overall expenses in CPS. Fine revenue from Red Light Cameras specifically is transferred to a reserve used to maintain Red Light Cameras and associated signage.

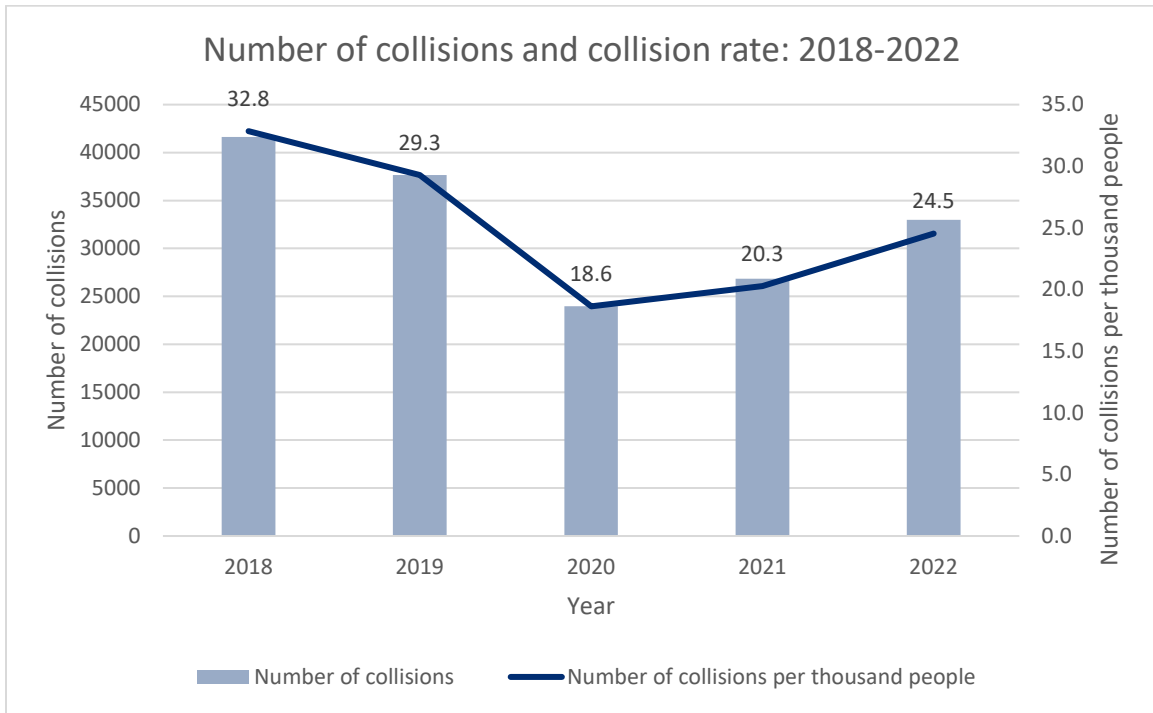
The total dollar amount of ATE violation tickets was \$55.5M in 2022. Approximately 70% of this money eventually makes its way into CPS budgets.

The following are funded from the operating budget of CPS's Traffic Section and occur throughout the year:

- Road safety campaigns
- Collaborative initiatives with municipalities regarding photo radar signage
- Communication with the public regarding changes to ATE
- Site assessments to address high collision/high speed locations
- Changes to equipment and technology at ATE sites
- Continued testing and inspection of ATE
- Data analysis to identify gaps in information and areas requiring improvement

Transportation safety outcomes

Citywide, the number of collisions fell in 2019 and 2020 (likely due to COVID-19 pandemic restrictions) and has been rebounding since then. The collision rate (measured as collisions per thousand Calgary residents) is still well below 2018 and 2019 levels, although it has been increasing since 2020.



There were a total of 88,460 collisions³ in 2019, 2020, and 2021, an average of 29,487 per year. 2022 saw 3,495 more collisions than this three-year average. The impact of pandemic restrictions on the three-year average should be noted.

³ Collision statistics exclude collisions occurring in parking lots.

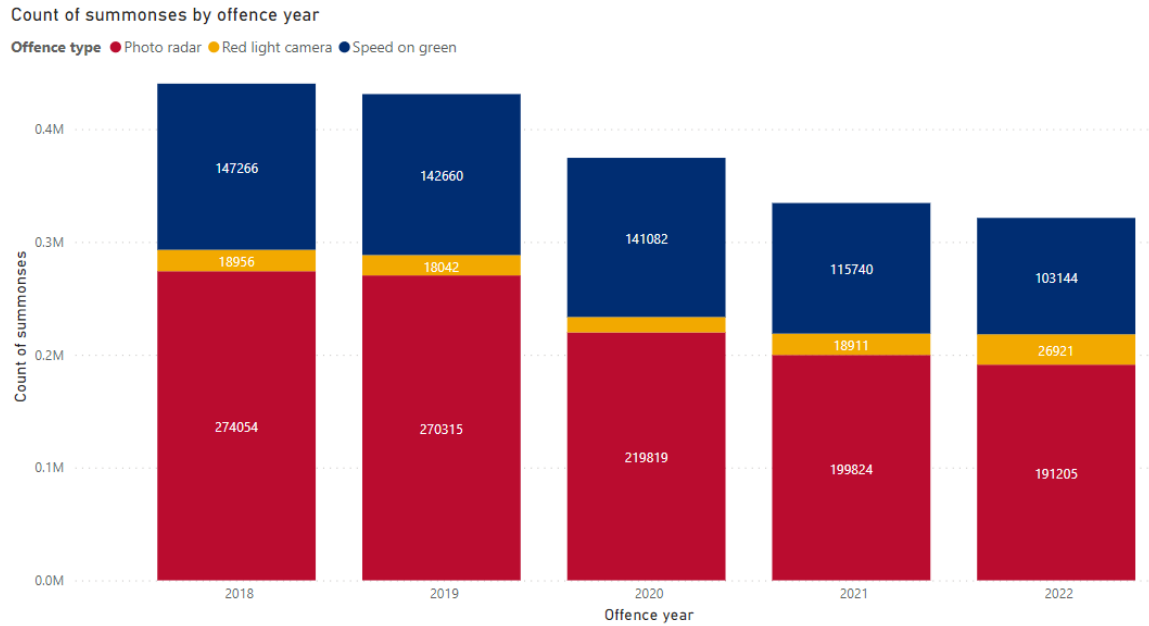
CPS tracks collisions according to severity, breaking them down into three categories: “fatal”, “injury”, and “property damage”. 2020 marked a low point for injury and property damage collisions, again likely due to pandemic restrictions. 2022 saw collision volumes rebound. The number of fatal collisions in 2022 was equal to the average of the three previous years, while the number of injury collisions in 2022 was 323 above the average of the three previous years. 3177 more property damage collisions occurred in 2022 compared to the average of the three previous years.

Collisions by severity			
Year	Fatal	Injury	Property damage
2019	19	2381	35255
2020	24	1791	22143
2021	14	2107	24726
2022	19	2416	30552

When it comes to fatalities arising from collisions, the opposite trend can be seen. 2020 had the most fatalities (28). 2022 saw two fewer fatalities than the 2019-2021 average. Injury collisions, however, followed the same trend discussed previously, with a dip in 2020 followed by a rebound. 2022 saw 406 more injury collisions than the 2019-2021 average.

Fatalities and injuries from collisions		
Year	Fatalities	Injuries
2019	20	3047
2020	28	2333
2021	16	2722
2022	19	3107

Although collisions have generally been rebounding since 2020, the same cannot be said for ATE violations/tickets. Court summonses from ATE have been steadily declining since 2018, as shown in the chart below.



Performance measures

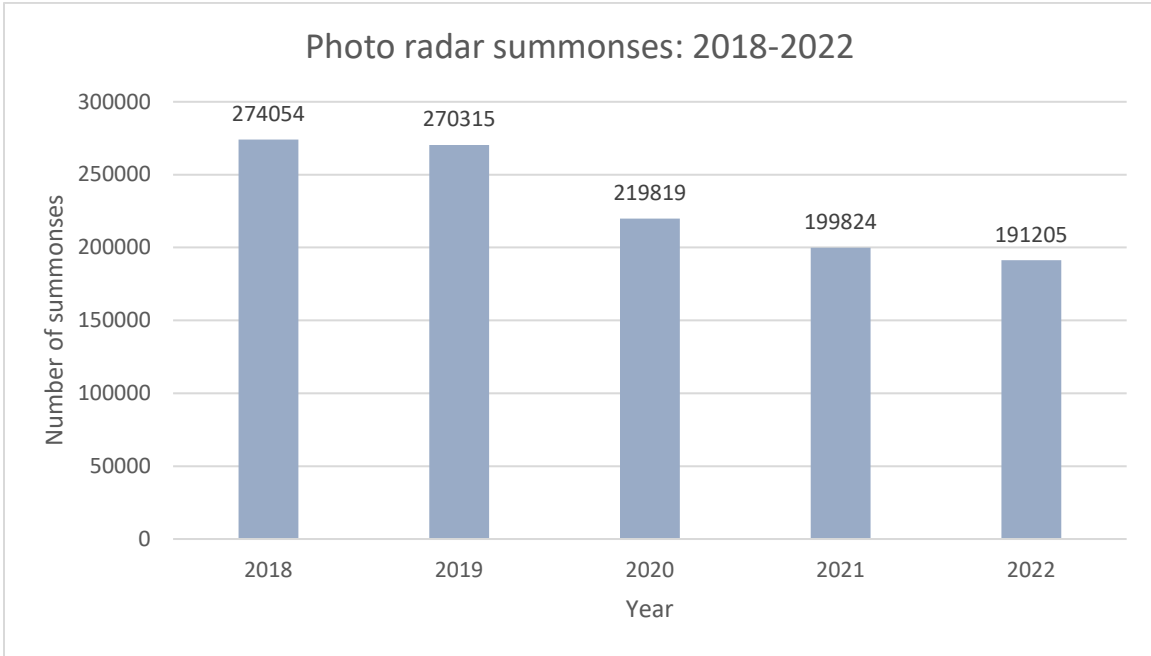
CPS's [Traffic Safety Plan](#) identifies the following performance measures and targets for 2022:

Traffic Safety Plan Performance Measures			
Performance measure	2022 target	2022 value	Outcome
Reportable fatal collisions	<17	19	Target exceeded
Total vulnerable road user collisions	<698	887	Target exceeded
Reportable injury collisions	<1962	2416	Target exceeded

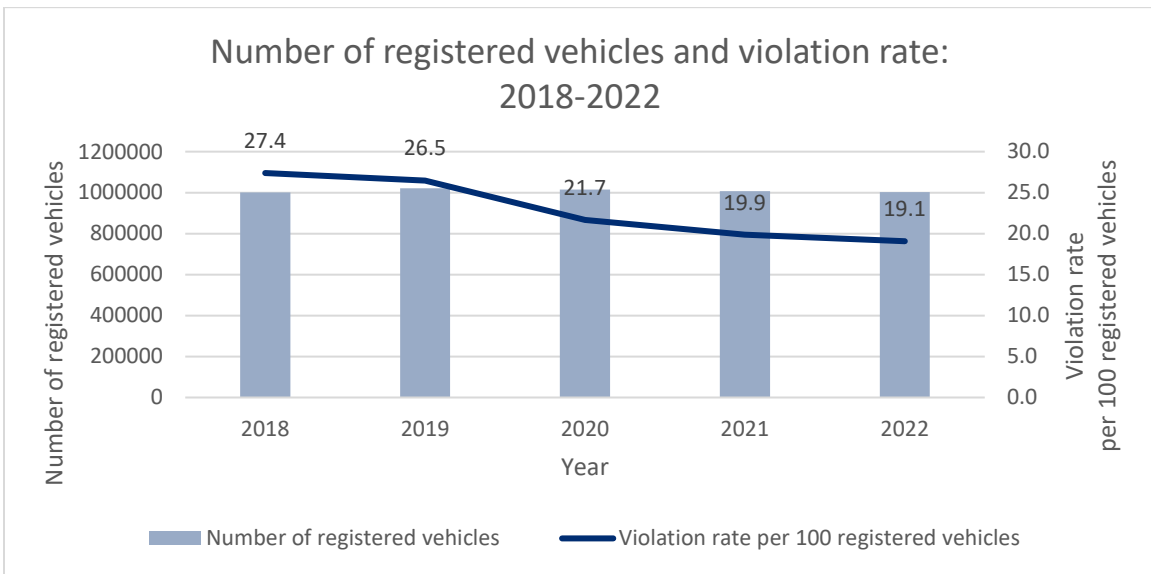
Unfortunately, the 2022 targets for reportable fatal collisions, vulnerable road user collisions, and reportable injury collisions were exceeded.

Photo radar enforcement

In 2022, summonses were issued based on violations at 417 photo radar deployment locations in Calgary. Summonses have been declining since 2018, with a significant drop between 2019 and 2020, likely due to COVID-19 pandemic restrictions.



The violation rate (photo radar summonses per 100 vehicles registered in Calgary) has also been declining since 2018.



ISD enforcement

When ISDs were first introduced in Calgary, studies were conducted comparing traffic safety outcomes at ISD sites in the years before and after implementation, finding substantial drops in collision rates, particularly for fatal collisions.

That said, data on summonses indicates that speed on green continues to be an issue in Calgary. The chart below compares vehicle speeds with the posted speed limit at speed on green sites. In 2022, the average difference between vehicle speeds (with summonses) and the posted speed was 18.2 km/h (shown by the “Speed delta – Average” line in blue). This represents average vehicle speeds 32% above the posted speed limit (shown by the “Percent over posted – Average” line in red). We can see that speeding at these sites was most severe in 2020, although the change over the years is small.

